

3-20-06

SMX 2020.2 (2002-105(PCT/US)(H103-0017-US02)

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of Qun Fan et al. Serial No. 10/559,720 Filed December 5, 2005

For PLATINUM-TITANIUM-TUNGSTEN FUEL CELL CATALYST

March 17, 2006

TO THE COMMISSIONER FOR PATENTS,

SIR:

## INFORMATION DISCLOSURE STATEMENT

In accordance with 37 C.F.R. 1.97 and 1.98 and MPEP 609, and in compliance with the duty of disclosure set forth in 37 C.F.R. 1.56, applicants submit the attached PTO/SB/08A for consideration by the Patent and Trademark Office in the above-entitled application and to be made of record therein.

Applicants submit herewith copies of the foreign patent documents and/or literature references. Some of the attached Japanese references include English abstracts. Applicants do not make any representation as to the accuracy of the additional information.

The Commissioner is hereby authorized to charge to Deposit Account No. 19-1345 an amount sufficient to cover the fee specified in 37 C.F.R. §1.17(p) for submission of this Supplemental Information Disclosure Statement, should a fee be required.

Respectfully submitted,

Derick E. Allen , Reg. No. 43,468

**SENNIGER POWERS** 

One Metropolitan Square, 16th Floor

nich E. allen

St. Louis, Missouri 63102

(314) 231-5400

DEA/skd Express Mail Label No. EV 775629385 US Mail Stop Amendment

PTO/SB/08A	Comple	Complete if Known		
	Application Number	10/559,720		
INFORMATION DISCLOSURE	Filing Date	December 5, 2005		
STATEMENT BY APPLICANT	Confirmation Number			
	First Named Inventor	Qun Fan et al.		
(use as many sheets as necessary	Group Art Unit			
	Examiner Name			
Sheet of 3	Attorney Docket No.	SMX 2020.2 (2002-		
O'Y'E 40		105(PCT/US))		

	17 JOUG E	U.S. 1	PATENT	DOCUMENTS	
Examiner Initials*	No.1	U.S. Patent Docume	ent Kind Code (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY
	1	3,711,385		Beer et al.	01-16-1973
	2	4,261,742	Α	Coupland et al.	04-14-1981
	3	4,061,495	Α	Selman et al.	12-06-1977
	4	4,261,742	Α	Coupland et al.	04-14-1981
	5	4,677,035	Α	Fiedler et al.	06-30-1987
	6	4,683,119		Selman et al.	07-28-1987
	7	4,737,205		Selman et al.	04-12-1988
	8	4,885,216	Α	Naik	12-05-1989
	9	5,068,161		Keck et al.	11-26-1991
	10	5,077,141	Α	Subhash K. Naik et al.	12-31-1991
	11	5,126,216		Capuano et al.	06-30-1992
	12	5,516,381	Α	Hisataka Kawai et al.	05-14-1996
	13	5,876,867		Itoh et al.	03-02-1999
	14	5,939,220		Gunner et al.	08-17-1999
	15	6,036,791	Α	Mitsuhashi et al.	03-14-2000
	16	6,045,671		Wu et al.	04-04-2000
	17	6,048,633		Fuji et al.	04-11-2000
	18	6,127,058		Pratt et al.	10-03-2000
	19	6,187,164		Warren et al.	02-13-2001
	20	6,187,468		Shinkai et al.	02-13-2001
	21	6,225,011		Gotoh et al.	05-01-2001
	22	6,268,077		Kelley et al.	07-31-2001
	23	6,294,280		Tanaka et al.	09-25-2001
	24	6,322,643	B1	Mitsuhashi et al.	11-27-2001
	25	6,632,299	B1	Harris	10-14-2003
	26	6,730,350		Finkelshtain et al.	05-04-2004

Examiner	Date	
Signature	Considered	

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>&</sup>lt;sup>1</sup>Unique citation designation number. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>6</sup>Applicant is to place a check mark here if English Translation is attached or place an "A" here if English language abstract is attached.

		1	·	80		
PTO/SB/0	)8A	-	MAR 1 7 20	106	Comple	ete if Known
		/	BA .		plication Number	10/559,720
INFO	<b>RMATION</b>	DISCLO	SURE CANTUE	y Pil	ing Date	December 5, 2005
STAT	EMENT B	Y APPL	CANTO	C	onfirmation Number	
				Fi	rst Named Inventor	Qun Fan et al.
(use as	many she	ets as ne	cessary)	Gi	oup Art Unit	
				E	caminer Name	
Sheet	2	of	3	At	torney Docket No.	SMX 2020.2 (2002- 105(PCT/US))

OIPE

	27	2002/0004453		Katori et al.		07-22-2004	
	28	2004/0142230			Haugen et al.	01-10-2002	
			FOREIG	N PATE	NT DOCUMENTS		
Examiner Initials	Cite No. <sup>1</sup>	Office	eign Patent Docur Number <sup>4</sup>	Kind Code (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	T <sub>e</sub>
	29	BE	895 174	Α	Johnson Matthey PLC	05-30-1983	<u> </u>
	30	GB	2 029 857	Α	J.E. Restall et al.	03-26-1980	
· · · · · · · · · · · · · · · · · · ·	31	GB	2 033 925	Α	Johnson Matthey Co Ltd.	05-29-1980	
	32	JP	2003-80085		Sony Corp.	03-18-2003	Α
	33	JP	01 021030	Α	Nippon Mining Co Ltd.	01-24-1989	Α
	34	JP	2001 294959	Α	Mitsubishi Heavy Ind Ltd.	10-26-2001	Α
	35	JP	08 100255	Α	Mitsubishi Materials Corp.	04-16-1996	Α
	36	JP	07 050008	Α	Showa Denko KK	02-21-1995	Α
	37	JP	06 065601	Α	Mitsubishi Materials Corp.	03-08-1994	Α
	38	JP	63 149356	Α	Res Inst Electric Magnetic Alloys	06-22-1988	Α
	39	JP	62 107040	Α	Sumitomo Metal Ind Ltd	05-18-1987	Α
	40	JP	04 072029	Α	Mitsubishi Materials Corp.	03-06-1992	Α
	41	JP	04 066635	Α	Mitsubishi Materials Corp.	03-03-1992	Α
	42	JP	04 066632	A	Mitsubishi Materials Corp.	03-03-1992	Α
	43	EP	0855 449	Α	Mitsubishi Materials Corp.	07-29-1998	
	44	EP	1080435	B1	Lacy et al.	03-07-2001	
	45	WO	99/16137		Narayanan et al.	04-01-1999	
	46	WO	00/35037	Α	Johnson Matthey PLC	06-15-2000	
	47	WO	02/22901	Α	Cannon Muskegon Corp	03-21-2002	
					·		
	•						

Examiner Date
Signature Considered

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>&</sup>lt;sup>1</sup> Unique citation designation number. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>6</sup> Applicant is to place a check mark here if English Translation is attached or place an "A" here if English language abstract is attached.

PTO/SB/08A				Complete if Known		
				Application Number	10/559,720	
INFORMATION DISCLOSURE			SURE	Filing Date	December 5, 2005	
STATEMENT BY APPLICANT			CANT	Confirmation Number		
				First Named Inventor	Qun Fan et al.	
(use as many sheets as necessary)		Group Art Unit				
				Examiner Name		
Sheet	3	of	3	Attorney Docket No.	SMX 2020.2 (2002-	
					105(PCT/US))	

		OTHER ART – NON PATENT LITERATURE DOCUMENTS					
Examiner Initials	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published					
	48 CHU, D. et al. – J. Electrochem. Soc. 1996, 143, 1685						
	49	COUPELAND et al. – Platinum Metals Review, vol. 26, no. 4, 1982, pp. 146-157					
	50	DAE-HEE YE et al. – Korean Journal of Materials Research, vol. 12, no. 12, 2002, pp. 897-903					
	51	RALPH, T.R. et al. – Catalysts for Low Temperature Fuel Cells Part 1: The Cathode Challenges, Platinum Metals Rev., 2002, 46, (1), pp. 3-14					
	52	SCHMIDT et al. – Rotating disk electrode measurements on the CO tolerance of a high-surface area Pt/Vulcan carbon fuel cell electrocatalyst, Journal of the Electrochemical Society, 1999, 146(4), pp. 1296-1304					
	53	SCHMIDT et al. – Characterization of high-surface-area electrocatalysts using a rotating disk electrode configuration, Journal of the Electrochemical Society, 1998, 145(7), pp. 2354-2358					
	54	STRASSER, P. et al. – Combinatorial Electrochemical Strategies For the Discovery of New Fuel-Cell Electrode Materials, Proceedings of the International Symposium on Fuel Cells for Vehicles, 41st Battery Symposium, The Electrochemical Society of Japan, Nagoya 2000, pp. 34-35					
	55	STRASSER, P. et al. – Combinatorial Electrochemical Techniques for the Discovery of New Fuel-Cell Cathode Materials, 2001, Vol. 2001-4, Direct Methanol Fuel Cells, Proceedings of the Electrochemical Society, New Jersey, Zawodzinski, T., eds, pp. 191-208					
	56	International Search Report for Application No. PCT/US2004/017876 dated 10-29-04, 7 pages					
	57	YASUDA et al., Polymerization-Pressure Dependencies of Properties of Perfluorosulfonate Cation-Exchanger Thin Films by Plasma Polymerization, Ber. Bunsenges. Phys. Chem. 98, No. 4, 1994, pp. 631-635.					

Examiner	Date	
Signature	Considered	

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>&</sup>lt;sup>1</sup>Unique citation designation number. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>6</sup>Applicant is to place a check mark here if English Translation is attached or place an "A" here if English language abstract is attached.